g/cm^3, having a composition distribution index greater than 45%, said index being defined as the weight percentage of copolymer molecules having an alpha-olefin content with 50% of the average total molar content of alpha-olefin.

REMARKS

Applicants have amended claims 16, 29, and 30 to more appropriately claim the invention. Claims 16-30 are pending.

This rejection is respectfully traversed for the following reasons. In order to properly anticipate Applicants' claimed invention under 35 U.S.C. § 102(b), each and every element of the claim must be found, either expressly or under principles of inherency, in a single prior art reference. Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." See M.P.E.P. § 2131 (8th Ed., Aug. 2001), quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Finally, "[t]he elements must be arranged as required by the claim." M.P.E.P. § 2131 (8th Ed. 2001), pp. 2100-69.

The Examiner rejected claims 16-30 under 35 U.S.C. § 102(b) as anticipated by Sonada et al. (U.S. Patent No. 5,707,732). Claims 16 and 29 recite, among other things, that at least one of the polymeric components (a) and (b) contains hydrolyzable organic silane groups grafted onto the polymer chain for compatibilization of the natural magnesium hydroxide with the polymeric components. Claim 30 recites, among other things, further adding to the polymer matrix a radical initiator and an organic silane compound containing at least one hydrolyzable group and at least one ethylenically unsaturated hydrocarbon group to obtain grafting of hydrolyzable organic silane groups

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onto the polymer chains for compatibilization of the natural magnesium hydroxide with the polymeric matrix.

In contrast, Sonada et al. disclose using alkenyl trialkoxy silanes to allow cross-linking and moisture curing of a copolymer. Specifically, Sonada et al. disclose grafting the copolymer with an alkenyl trialkoxy silane in the presence of an organic peroxide so that the "hydrolysable polymers are moisture cured in the presence of a silanol condensation catalyst" (col. 6, lines 41-56). In distinction, the present invention, unlike Sonada et al., is not intended to allow moisture curing of a polymer. In Applicants' invention, the hydrolysable organic silane groups "give a more effective interaction between natural magnesium hydroxide and polyethylene polymers with a uniform distribution of the filler into the polymer matrix (page 6, lines 15-18). Particularly, "By suitably dosing the amount of the silane groups, this performance is achieved without causing an appreciable cross-linking of the polymer matrix, which keeps its thermoplastic properties after deposition onto a cable core. This allows ease of recycle for the cable coating" (page 6, lines 16-26).

Thus, Sonada et al. fail to disclose at least hydrolyzable organic silane groups grafted onto the polymer chain for compatibilization of the natural magnesium hydroxide with the polymer as recited by pending claims 16, 29, and 30.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims under 35 U.S.C. § 102(b). Applicants submit that claims 16, 29, and 30 are in condition for allowance, as are claims 17-28 at least by virtue of their dependency from allowable claim 16.

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In view of the foregoing amendments and remarks, Applicant respectfully requests the reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: September 11, 2002

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APPENDIX TO AMENDMENT OF SEPTEMBER 11, 2002

VERSION WITH MARKINGS TO SHOW CHANGES MADE

AMENDMENTS TO THE CLAIMS

16. (Amended) A self-extinguishing cable comprising a conductor and a flame-retardant coating, said flame-retardant coating comprising:

(a) an ethylene homopolymer or copolymer having a density of from 0.905 to 0.970 g/cm^3, wherein said ethylene homopolymer or copolymer are: ethylene homopolymers; copolymers of ethylene with an alpha-olefin; copolymers of ethylene with an ethylenically unsaturated ester; or mixtures thereof;

(b) a copolymer of ethylene with at least one alpha-olefin, and optionally with a diene, said copolymer (b) having a density of from 0.860 to 0.904 g/cm^3, and having a composition distribution index greater than 45%, said index being defined as the weight percentage of copolymer molecules having an alpha-olefin content within 5% of the average total molar content of alpha-olefin;

(c) natural magnesium hydroxide in an amount such as to impart flame-retardant properties;

wherein at least one of the polymeric components (a) and (b) contains [hydrolyable] hydrolyzable organic silane groups grafted onto the polymer chain for compatibilization of the natural magnesium hydroxide with the polymeric components.

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29. (Amended) A flame-retardant composition comprising:

(a) an ethylene homopolymer or copolymer having a density of from 0.905 to 0.970 g/cm^3, wherein said ethylene homopolymer or copolymer are: ethylene homopolymers; copolymers of ethylene with an alpha-olefin; copolymers of ethylene with an ethylenically unsaturated ester; or mixtures thereof;

(b) a copolymer of ethylene with at least one alpha-olefin, and optionally with a diene, said copolymer (b) having a density of from 0.860 to 0.904 g/cm^3, and having a composition distribution index greater than 45%, said index being defined as the weight percentage of copolymer molecules having an alpha-olefin content with 50% of the average total molar content of alpha-olefin;

(c) natural magnesium hydroxide in an amount such as to impart flame-retardant properties;

wherein at least one of the polymeric components (a) and (b) contains hydrolyzable organic silane groups grafted onto the polymer chain <u>for compatibilization of the natural magnesium hydroxide with the polymeric components</u>.

30. (Amended) A method for producing a self-extinguishing cable, said method comprising the following steps: (1) preparing a polymer mixture having flame-retardant properties; and (2) extruding said mixture on a conductor optionally pre-coated with an insulating layer, wherein step (1) comprises mixing a polymer matrix with a predetermined amount of natural magnesium hydroxide, and further adding to said polymer matrix a radical initiator and an organic silane compound containing at least

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one hydrolyzable group and at least one ethylenically unsaturated hydrocarbon group, in order to obtain grafting of hydrolyzable organic silane groups onto the polymer chains for compatibilization of the natural magnesium hydroxide with the polymeric matrix; said polymer matrix comprising:

(a) an ethylene homopolymer or copolymer having a density of from 0.905 to 0.970 g/cm^3, wherein said ethylene homopolymer or copolymer are: ethylene homopolymers; copolymers of ethylene with an alpha-olefin; copolymers of ethylene with an ethylenically unsaturated ester; or mixtures thereof;

(b) a copolymer of ethylene with at least one alpha-olefin, and optionally with a diene, said copolymer (b) having a density of from 0.860 o 0.904 g/cm^3, having a composition distribution index greater than 45%, said index being defined as the weight percentage of copolymer molecules having an alpha-olefin content with 50% of the average total molar content of alpha-olefin.

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